

PROJECTED

{ assuming observed
groundwater ^{SW} releases }

Facility Name: MERCK & Co.

Location: 126 East Lincoln Ave., Rahway, NJ

EPA Region: II

Person(s) in Charge of the Facility: _____

Name of Reviewer: Ed Haven Date: 7/6/88

General Description of the Facility:

(For example: landfill, surface impoundment, pile, container;
types of hazardous substances; location of the facility;
contamination route of major concern; types of information
needed for rating; agency action, etc.)

Scores: $S_M = 43.23$ ($S_{gw} = 73.47$ $S_{sw} = 13.99$ $S_a = 0$)

$S_{FE} =$

$S_{DC} =$

HRS COVER SHEET

240330



GROUND WATER ROUTE WORK SHEET						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 <u>45</u>	1	45	45	3.1	
If observed release is given a score of 45, proceed to line 4 . If observed release is given a score of 0, proceed to line 2 .						
2 Route Characteristics					3.2	
Depth to Aquifer of Concern	0 1 2 3	2		6		
Net Precipitation	0 1 2 3	1		3		
Permeability of the Unsaturated Zone	0 1 2 3	1		3		
Physical State	0 1 2 3	1		3		
Total Route Characteristics Score				15		
3 Containment	0 1 2 3	1		3	3.3	
4 Waste Characteristics					3.4	
Toxicity/Persistence	0 3 6 9 12 15 <u>18</u>	1	18	18		
Hazardous Waste Quantity	0 1 2 3 4 5 6 <u>7</u> 8	1	7	8		
Total Waste Characteristics Score			25	26		
5 Targets					3.5	
Ground Water Use	0 1 <u>2</u> 3	3	6	9		
Distance to Nearest Well/Population Served	0 4 8 8 10 12 16 18 20 24 <u>30</u> 32 35 40	1	30	40		
Total Targets Score			36	49		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			40,500	57,330		
7 Divide line 6 by 57,330 and multiply by 100 $S_{gw} = 70.64$						

SURFACE WATER ROUTE WORK SHEET						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 <u>45</u>	1	<u>45</u>	45	4.1	
If observed release is given a value of 45, proceed to line 4 . If observed release is given a value of 0, proceed to line 2 .						
2 Route Characteristics					4.2	
Facility Slope and Intervening Terrain	0 1 2 3	1		3		
1-yr. 24-hr. Rainfall	0 1 2 3	1		3		
Distance to Nearest Surface Water	0 1 2 3	2		6		
Physical State	0 1 2 3	1		3		
Total Route Characteristics Score				15		
3 Containment	0 1 2 3	1		3	4.3	
4 Waste Characteristics					4.4	
Toxicity/Persistence	0 3 6 9 12 15 <u>18</u>	1	<u>18</u>	18		
Hazardous Waste Quantity	0 1 2 3 4 5 6 <u>7</u> 8	1	<u>7</u>	8		
Total Waste Characteristics Score			<u>25</u>	26		
5 Targets					4.5	
Surface Water Use	0 1 <u>2</u> 3	3	<u>6</u>	9		
Distance to a Sensitive Environment	0 <u>1</u> 2 3	2	<u>2</u>	6		
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 12 16 18 20 24 30 32 35 40	1	<u>0</u>	40		
Total Targets Score			<u>8</u>	55		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			<u>9000</u>	64,350		
7 Divide line 6 by 64,350 and multiply by 100 $S_{sw} = 13.99$						

AIR ROUTE WORK SHEET						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	(0) 45	1	0	45	5.1	
Date and Location:						
Sampling Protocol:						
If line 1 is 0, the S = 0. Enter on line 5 . If line 1 is 45, then proceed to line 2 .						
2 Waste Characteristics					5.2	
Reactivity and Incompatibility	0 1 2 3	1		3		
Toxicity	0 1 2 3	3		9		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score				20		
3 Targets					5.3	
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30		
Distance to Sensitive Environment	0 1 2 3	2		6		
Land Use	0 1 2 3	1		3		
Total Targets Score				39		
4 Multiply 1 x 2 x 3			0	35,100		
5 Divide line 4 by 35,100 and multiply by 100 S _a = 0						

	S	S ²
Groundwater Route Score (S _{gw})	73.47	5397.84
Surface Water Route Score (S _{sw})	13.99	195.72
Air Route Score (S _a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		5593.56
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		74.79
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73$		S _M = 43.23

WORKSHEET FOR COMPUTING S_M